

**OPERATOR MANUAL**

**Basil® 3600 Bedding Dispenser**

(2009-03-31)

P122996-163

# A WORD FROM STERIS CORPORATION

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This manual contains important information on the proper use of the **Basil® 3600 Bedding Dispenser**. Refer to **SECTION 5, ROUTINE MAINTENANCE**, for instructions in routine care of this bedding dispenser. **All personnel and department heads are urged to carefully review and become familiar with the Safety Precautions and instructions contained herein.** These instructions are important to protect the health and safety of personnel operating this bedding dispenser and should be retained in a conveniently accessible area for quick reference. This equipment is specifically designed only for the uses outlined in this manual.

Complete instructions for uncrating and connecting utilities, as well as the equipment drawing, have been provided. If they are missing, contact STERIS for replacement copies, providing the serial and model numbers of the bedding dispenser.

## Advisory

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**IMPORTANT:** A listing of the Safety Precautions to be observed when operating and servicing this bedding dispenser can be found in SECTION 1 of this manual. Do not operate the equipment until you have become familiar with this information.

Any alteration of this equipment not authorized or performed by STERIS will void the warranty. Alteration of this equipment which could adversely affect its operation and efficacy may violate national, state and local laws or regulations.

## Indications For Use

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The **Basil 3600 Bedding Dispenser** is an automatic, conveyorized unit designed to dispense bedding into animal cages as they pass through the unit. The dispensers are capable of handling most solid bedding used in the care of laboratory animals.

## **Service Information**

A thorough preventive maintenance program is essential to help ensure safe and proper equipment operation. Customers are encouraged to contact STERIS concerning our comprehensive annual maintenance program. Under the terms of the program, preventive maintenance, adjustments and replacement of worn parts are performed on a scheduled basis to help ensure equipment performance at peak capability and to help avoid untimely or costly interruptions.

STERIS maintains a global staff of well-equipped, qualified service technicians to provide this service, as well as expert repair services. Please contact STERIS for details.

**The base language of this document is  
ENGLISH. Any translation must be made  
from the base language document.**



**Manufactured by:**

Corporation STERIS Canada  
490, boulevard Armand-Paris  
G1C 8A3  
Québec, QC, CANADA

**Sales and Service:**

STERIS Corporation  
5960 Heisley Road  
Mentor, Ohio 44060  
440-354-2600 • 800-444-9009

[www.steris.com](http://www.steris.com)



STERIS Limited  
STERIS House  
Jays Close  
Viables  
Basingstoke  
Hampshire  
RG22 4AX  
United Kingdom

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# SAFETY PRECAUTIONS

The following *Safety Precautions* **must** be observed when operating or servicing this **Basil® 3600 Bedding Dispenser**. **WARNING** indicates the potential for personal injury and **CAUTION** indicates the potential for damage to equipment. For emphasis, certain *Safety Precautions* are repeated throughout the manual. **It is important to review ALL Safety Precautions before operating or servicing the bedding dispenser.**

## WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:

-  Repairs and adjustments to this equipment must be made only by STERIS or STERIS-trained service personnel. Non-routine maintenance performed by unqualified personnel or installation of unauthorized parts could cause personal injury, result in improper equipment performance, void the warranty or result in costly damage. Contact STERIS regarding service options.
-  Regularly scheduled preventive maintenance is required for safe and reliable operation of this equipment. Contact STERIS to schedule preventive maintenance.

## WARNING – PERSONAL INJURY HAZARD:

-  Keep fingers and hands away from chains, gears or any other moving parts. Also avoid wearing loose clothing that could get caught in mechanical parts.

## WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:

-  Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.
-  Fasteners and star washers are used to ensure protective bonding continuity. Always reinstall any star washer which may have been removed during installation or servicing.

## CAUTION – POSSIBLE EQUIPMENT DAMAGE:

-  Do not wash conveyor rollers in water exceeding 140°F (60°C).
-  Use non-abrasive cleaners when cleaning dispenser. Follow directions on container and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners are harmful to stainless steel.

The table below contains symbols which may be on your **Basil 3600 Bedding Dispenser** components:

**Table 1-1. Definition of Symbols**

Symbol	Definition
	Protective Earth (Ground).
	Warning! Risk of Electrical Shock.
	Warning. Refer to Manual For Further Information.
	Rotation Direction.

The table below contains symbols which may be on the identification nameplate of your **Basil 3600 Bedding Dispenser**:

**Table 1-2. Definition of Symbols**

Symbol	Definition
<b>MOD.</b>	Model Number of Bedding Dispenser.
<b>SER.</b>	Serial Number of Bedding Dispenser.
<b>kW</b>	Power Rating of Bedding Dispenser.
<b>V</b>	Voltage Rating of Bedding Dispenser.
<b>A</b>	Amperage Rating of Bedding Dispenser.
<b>PH/Hz</b>	Phase of Bedding Dispenser / Frequency Rating of Bedding Dispenser.
<b>WIRE X + PE</b>	Number of Wires [X] in the Electrical Cable and Protective Ground Wire.



**IMPORTANT:** A listing of the Safety Precautions to be observed when operating and servicing this bedding dispenser can be found in SECTION 1 of this manual. Do not operate the equipment until you have become familiar with this information.

## 2.1 General

An equipment drawing (122-998-267 or 122-998-283), showing all utility and space requirements, was supplied with the Basil® 3600 Bedding Dispenser. The clearance space specified on the equipment drawing is necessary for ease of installation and to help ensure proper operation and maintenance of equipment. If document is missing or misplaced, contact STERIS, giving the serial and model numbers of the bedding dispenser. A replacement copy will be sent promptly.

## 2.2 Installation Checklist

After bedding dispenser has been installed by a qualified service technician, complete the following checklist to help ensure complete and correct installation. If desired, contact STERIS to schedule a demonstration of proper equipment operation.

- Disconnect switch (not by STERIS), capable of being locked in OFF position only, is installed in the electrical supply line in the same room as the bedding dispenser and within 10 feet (3 m) of the electrical control box.
- Bedding dispenser is positioned, as shown on the equipment drawing, with the required service clearance space and in relation to building supply lines.
- Electrical supply for bedding dispenser is as specified on the equipment drawing.
- Both conveyor motors (loading/unloading drive motor and bedding conveyor motor) rotate in the direction shown by the arrow.
- Verify exhaust guard, elbow and dust bag are in proper position.
- Verify cage flip-over system is firmly installed and in proper position.
- Verify photoelectric switch is properly installed at the end of the unload conveyor.

## **2.3 Technical Specifications**

These specifications are intended to describe the technical information given on the bedding dispenser identification nameplate and to state other relevant information. Verify equipment drawing (122-998-267 or 122-998-283) or identification nameplate, located on upper left corner of control panel (See Figure 3-1), for proper voltage and amperage.

### **2.3.1 Voltage, Amperage and Power Consumption**

The Basil 3600 Bedding Dispenser operates on:

- 208 V, 60 Hz, three-phase, neutral, four-wire
- 480 V, 60 Hz, three-phase, three-wire

Maximum current and power consumptions are:

	<b>Amp</b>	<b>kW</b>
• 208 V	13.9	2.6
• 480 V	5.6	2.7

Refer to *Uncrating/Installation Instructions* (P122997-217) for proper connection.

### **2.3.2 Permissible Environmental Conditions**

This equipment is designed to give optimal results in an environment where maximum relative humidity is 80% for temperatures up to 88°F (31°C) decreasing linearly to 50% relative humidity at 104°F (40°C).

### **2.3.3 Seismic Anchorage System**

A seismic anchorage system is available for high-risk seismic zones.

# COMPONENT IDENTIFICATION



**IMPORTANT:** A listing of the Safety Precautions to be observed when operating and servicing this bedding dispenser can be found in SECTION 1 of this manual. Do not operate the equipment until you have become familiar with this information.

## 3.1 General

Before operating the Basil® 3600 Bedding Dispenser, it is important to become familiar with the location and function of all components and controls (see Figures 3-1, 3-2 and 3-3).

## 3.2 Component Identification

### 3.2.1 Cage Conveyor System

The cage conveyor system includes twenty-six 1-1/2" (38 mm) diameter PVC rollers to move the cages. The rollers are designed for free movement on hub and easy removal for cleaning purposes. The cage conveyor system motor is 1/6-hp speed reducer, ac, 1 ph.

### 3.2.2 Bedding Dispenser System

The bedding dispenser system includes a heavy chain belt that allows bedding to pass through the chain without jamming in the drive sprockets. Low-friction UHMW guides and wear pads provide smooth, quiet travel throughout the dispensing cycle.

The dispenser belt motor is 1-hp, variable speed motor.

### 3.2.3 Service Access Panels and Cleanout Door

The four service access panels allow sprocket and chain repair of the cage conveyor system rollers. Unload end of the dispenser has two access panels. Loading hopper has a hinged cover. The bedding dispenser belt has a removable cover.

The cleanout door, on unload end, allows access to lower hopper.

### 3.2.4 Drain Connection and Removable Debris Tray

The drain connection with plug in lower hopper helps with cleaning and draining of the bedding dispenser.

### 3.2.5 Adjustable Legs

The adjustable legs allow leveling of the bedding dispenser and adjusting of the conveyor height.

### 3.2.6 Cage Flip-Over System

The system is provided at load end of the Basil 3600 Bedding Dispenser to grab the cages coming out of the Basil® 6700 Tunnel Cage Washer and flip them right side up onto the cage conveyor before filling them with bedding.

### **3.2.7 Photoelectric Conveyor Stop**

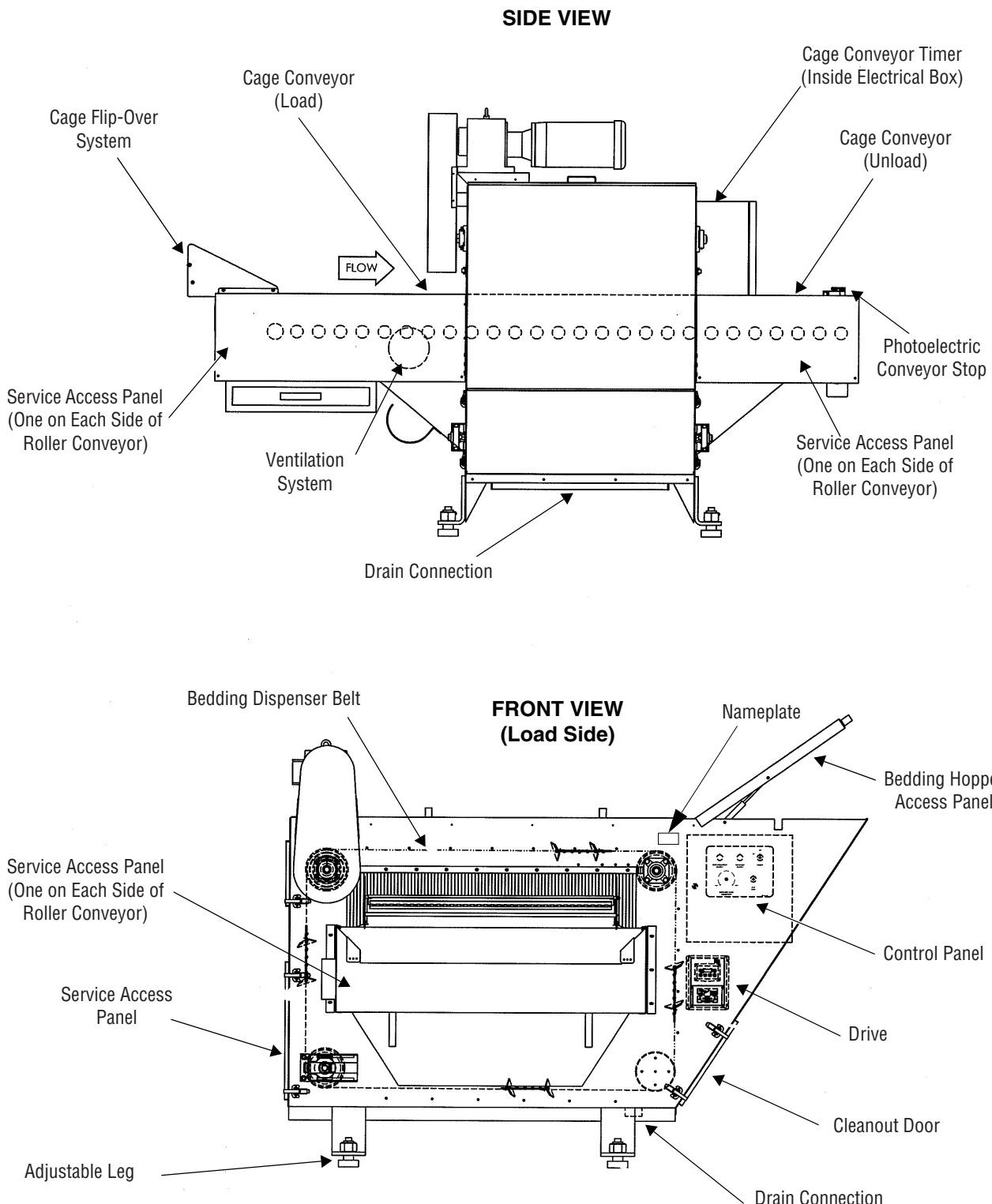
A photoelectric switch can be provided at the unload end of the cage conveyor to stop rollers when an item reaches the end of the cage conveyor.

### **3.2.8 Cage Conveyor Timer**

A timer is provided, inside electrical box, to control cage conveyor system operation.

To ensure bedding conveyor is loaded and ready to dispense bedding, timer creates a delay of a few seconds before starting cage conveyor system; thus, cages can be filled uniformly.

Time delay can be adjusted only by a service technician.



**Figure 3-1. Basil 3600 Bedding Dispenser**

### 3.2.9 Control Panel See Figure 3-2.

- **Power ON/OFF** selector switch: turning **Power ON/OFF** selector switch to **ON** position activates control and unit operations. Turning **Power ON/OFF** selector switch to **OFF** position cuts electrical supply to the unit.
- **Unit STOP** pushbutton (red): Stops cage conveyor rollers, bedding dispenser belt and dust collection system operations. When rollers, belt and dust collection system are stopped, the corresponding red indicator light is **ON**.
- **Dispenser ON/OFF** pushbutton: Press **Dispenser ON/OFF** pushbutton to **ON** position to activate the bedding dispenser belt drive motor. Press **Dispenser ON/OFF** pushbutton to **OFF** position to cut electrical supply to bedding dispenser belt drive motor.
- **Dispenser Adjustment** knob: Turn **Dispenser Adjustment** knob to the left to decrease bedding flow. Turn **Dispenser Adjustment** knob to the right to increase bedding flow.
- **Dust Collector ON/OFF** pushbutton: Press **Dust Collector ON/OFF** pushbutton to **ON** position to activate dust collection system. Press **Dust Collector ON/OFF** pushbutton to **OFF** position to cut electrical supply to dust collection system.
- **Indicator** lights: An indicator light is linked to the unit electrical supply power, dispenser, unit and dust collection system. When an **indicator** light is **ON**, corresponding system is activated.

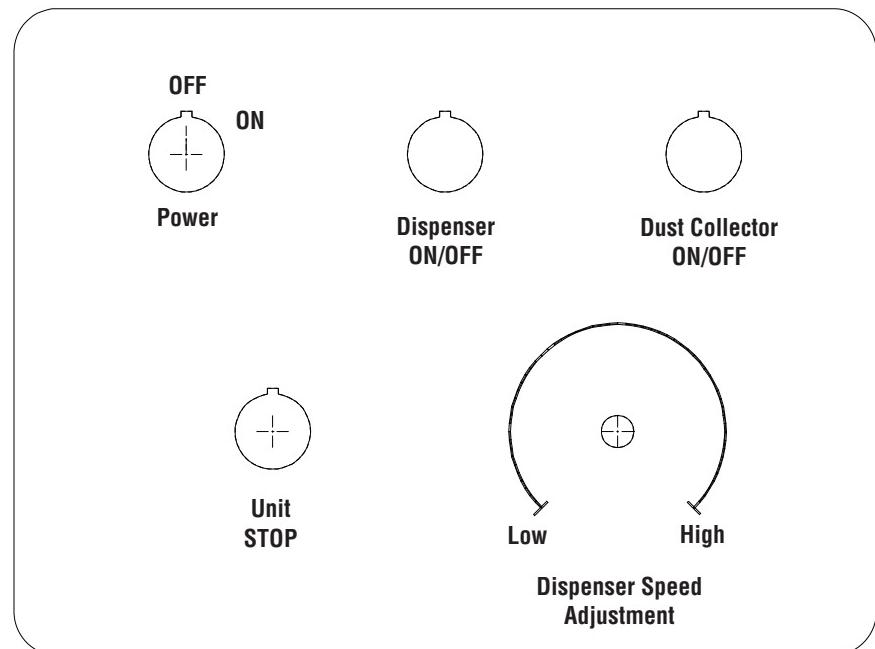
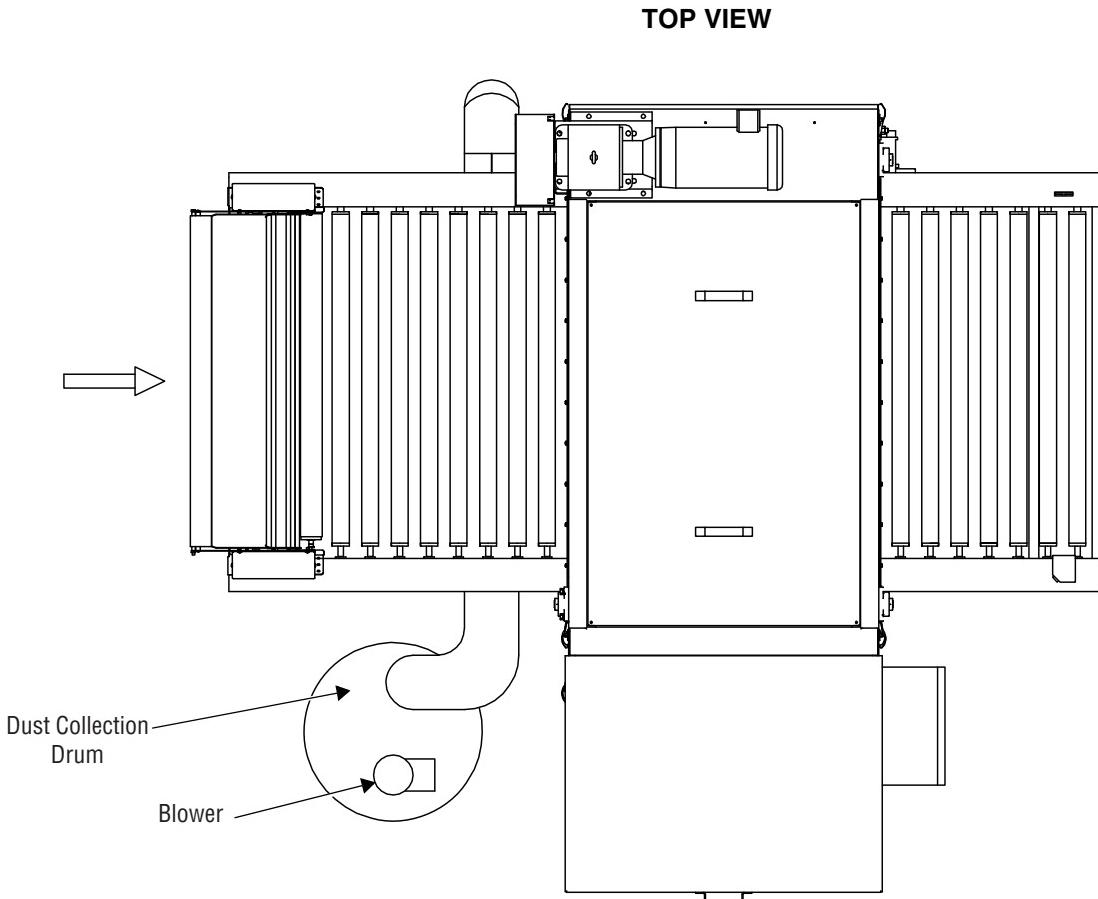


Figure 3-2. Basil 3600 Bedding Dispenser Control Panel

### **3.2.10 Dust Collection System**

**See Figure 3-3.**

The system removes dust generated by the filling operation and eliminates the need for connection to building exhaust. The system includes a 2-hp blower and a 55-gallon drum connected to the bedding dispenser ventilation system. The dust collection system has a **Dust Collector ON/OFF** pushbutton on the control panel.



**Figure 3-3. Dust Collection System**

# OPERATING INSTRUCTIONS



**IMPORTANT:** A listing of the Safety Precautions to be observed when operating and servicing this bedding dispenser can be found in SECTION 1 of this manual. Do not operate the equipment until you have become familiar with this information.

## 4.1 Before Operating Bedding Dispenser

Verify hopper is filled with bedding. Fill as necessary as follows:

1. Open hinged cover (refer to Figure 3-1).
2. Fill bedding up to wire netting.  
Maximum capacity 11-1/2 ft<sup>3</sup> (0.3 m<sup>3</sup>) of bedding.
3. Close hinged cover.

## 4.2 Operating Bedding Dispenser



**WARNING – PERSONAL INJURY HAZARD:** Keep fingers and hands away from chains, gears or any other moving parts. Also avoid wearing loose clothing that could get caught in mechanical parts.

Refer to Figure 3-2 for control location.

1. Position **Power ON/OFF** selector switch to **ON**.
2. Pull **Unit STOP** pushbutton (red) to start conveyor.
3. After pulling **Unit STOP** pushbutton, wait two seconds and push **Dispenser ON/OFF** pushbutton to activate bedding dispenser system.
4. With **Dispenser ON/OFF** pushbutton in **OFF** position, you may run bedding dispenser conveyor without dispensing material.
5. Press **Dust Collector ON/OFF** pushbutton to activate dust collection system.
6. If necessary, adjust amount of bedding desired in cages using **Dispenser Adjustment** knob to increase/decrease bedding flow.
7. Place cages top side up on conveyor rollers.

*NOTE: Cages going into cage flip-over system are automatically flipped from inverted position to top side up position when exiting Basil® 6700 Tunnel Cage Washer.*

8. As cages pass through unit, a controlled level of bedding material is dispensed into cages.

*NOTE: Cages can pass beneath hopper in any random pattern and will still be filled with the same amount of bedding per square inch.*

9. When cages are filled with bedding, remove cages from unload conveyor rollers.

With photoelectric conveyor stop system, conveyor rollers stop automatically when a cage reaches end of unload conveyor.

**IMPORTANT:** Conveyor, bedding dispenser and dust collection system operations may be halted at any time by pressing red **Unit STOP** pushbutton.

### **4.3 Shutdown**

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At the end of the day:

1. Press **Dispenser ON/OFF** pushbutton to **OFF**.
2. Press **Dust Collector ON/OFF** pushbutton to **OFF**.
3. Position **Power ON/OFF** selector switch to **OFF**.
4. Clean bedding dispenser as explained in *SECTION 5, ROUTINE MAINTENANCE*.

# ROUTINE MAINTENANCE



**IMPORTANT:** A listing of the Safety Precautions to be observed when operating and servicing this bedding dispenser can be found in SECTION 1 of this manual. Do not operate the equipment until you have become familiar with this information.

## 5.1 General Information



### WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE

**HAZARD:** Regularly scheduled preventive maintenance is required for safe and reliable operation of this equipment. Contact STERIS to schedule preventive maintenance.

Procedures described in this section should be performed at regular intervals as indicated.

Due to local conditions (air quality, amount of usage), more frequent maintenance than indicated may be required. Customer should maintain a record of all maintenance procedures performed on the Basil® 3600 Bedding Dispenser.

Should a problem occur, refer to SECTION 6, TROUBLESHOOTING. Refer to SECTION 7, REPLACEMENT PARTS AND PRODUCTS, for replacement parts list.

**NOTE:** Never permit unqualified persons to service the bedding dispenser.



### WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:

- Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.
- Fasteners and star washers are used to ensure protective bonding continuity. Always reinstall any star washer which may have been removed during installation or servicing.

## **5.2 Preventive Maintenance**

**Table 5-1** is to be used as a preventive maintenance record and, along with the instructions in this section, as a guide to performing preventive maintenance.

**IMPORTANT:** Preventive Maintenance is not covered under warranty.

**Table 5-1. Preventive Maintenance Guide**

<b>Recommended frequency of inspection is indicated in the right column. Usage and utility conditions may require more or less frequent inspections.</b>		<b>Suggested Frequency</b>
<b>1.0 PREPARATION FOR PREVENTIVE MAINTENANCE</b>		
1.1	Discuss equipment with operators.	As required
1.2	Follow appropriate safety procedures; prepare unit for preventive maintenance.	As required
<b>2.0 MISCELLANEOUS CHECKS</b>		
2.1	Inspect mechanical parts for obvious wear. Replace parts if necessary.*	6 X/ year
2.2	Verify proper operation of pushbuttons and selector switch (refer to <b>SECTION 3.2.9</b> ).	6 X/ year
2.3	Verify gearbox oil level as described in <b>SECTION 5.4</b> .	6 X/ year
<b>3.0 BEDDING DISPENSER BELT</b>		
3.1	Verify proper amount of bedding is being dispensed by unit into cages. Adjust <b>Dispenser Adjustment</b> knob as necessary.	6 X/ year
3.2	Verify shovel-type blades are bringing bedding to top of hopper.	6 X/ year
3.3	Grease dispenser belt bearings as described in <b>SECTION 5.4</b> .	4 X/ year
3.4	Verify proper adjustment and tracking on conveyor take-up bearings.	6 X/ year
3.5	Inspect dispenser belt for looseness. Tighten if necessary.	6 X/ year
<b>4.0 CAGE FLIP-OVER SYSTEM</b>		
4.1	Inspect cage flip-over system for component looseness. Tighten if necessary.	6 X/ year
4.2	Inspect drive chain for looseness. Tighten if necessary.	6 X/ year
4.3	Inspect mechanical parts for obvious wear. Replace parts if necessary.*	6 X/ year
4.4	Grease drive chain.	As required
<b>5.0 FINAL CHECKOUT AND TEST</b>		
5.1	Clean dirt and lint from components. Verify all wiring, terminals and socket connections for damage or fraying.	6 X/ year
5.2	Verify unit has proper labels (caution, warning).	6 X/ year
5.3	Run a few cages to verify proper operation.	6 X/ year
5.4	Reinstall any panel or cover removed. Inspect area to ensure removal of all materials used during inspection.	6 X/ year
5.5	Notify Customer preventive maintenance inspection is completed.	6 X/ year

\* Contact STERIS for this service. Service charges may be incurred. Consult your warranty for details.

## 5.3 Weekly Cleaning

### 5.3.1 Clean Cage Conveyor Rollers



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lock-out-tagout and electrical safety-related work practice standards.



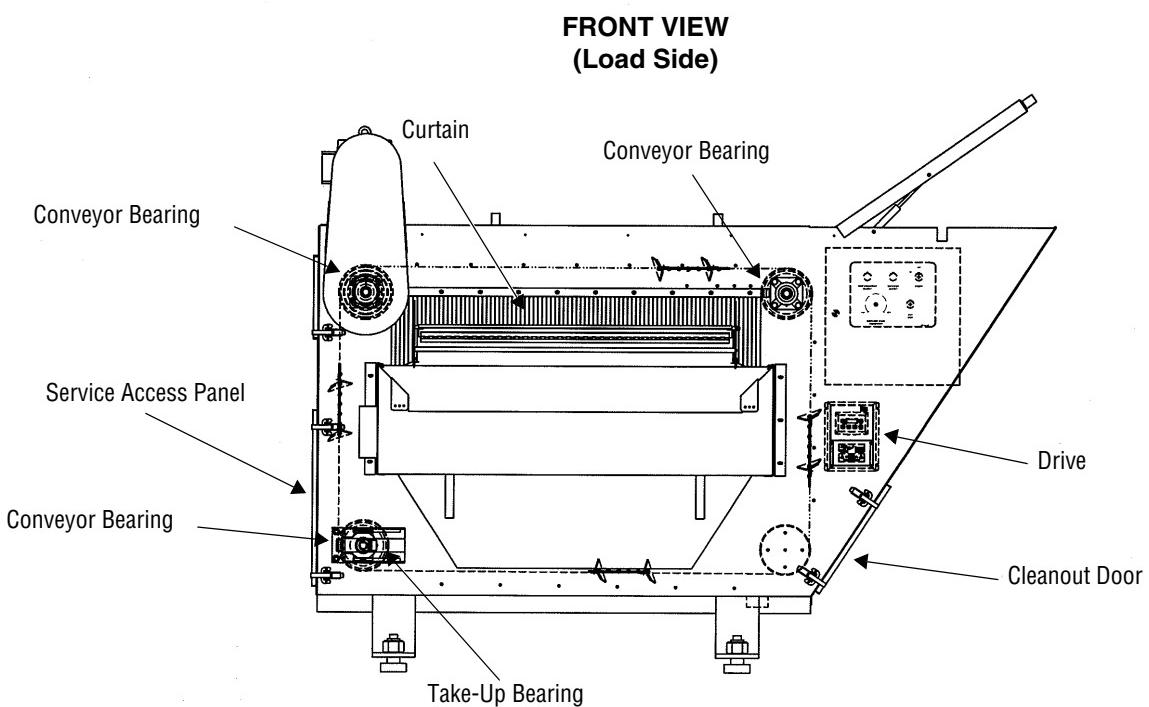
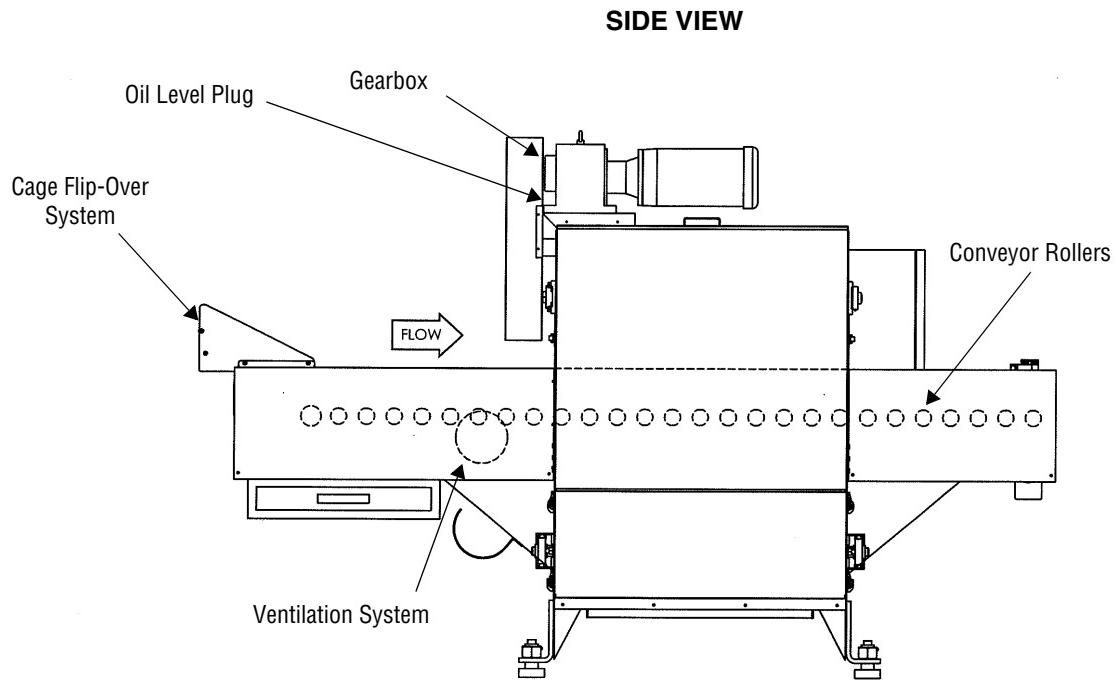
#### CAUTION – POSSIBLE EQUIPMENT DAMAGE:

- Do not wash conveyor rollers in water exceeding 140°F (60°C).
- Use non-abrasive cleaners when cleaning dispenser. Follow directions on container and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners are harmful to stainless steel.

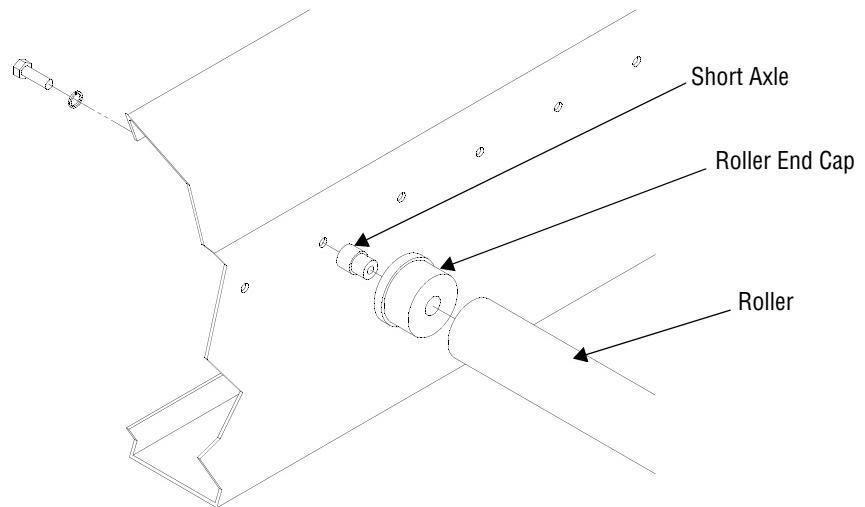
#### See Figures 5-1, 5-2 and 5-3.

Once a week, cage conveyor rollers must be thoroughly cleaned to remove gross soil and debris (see Figure 5-1).

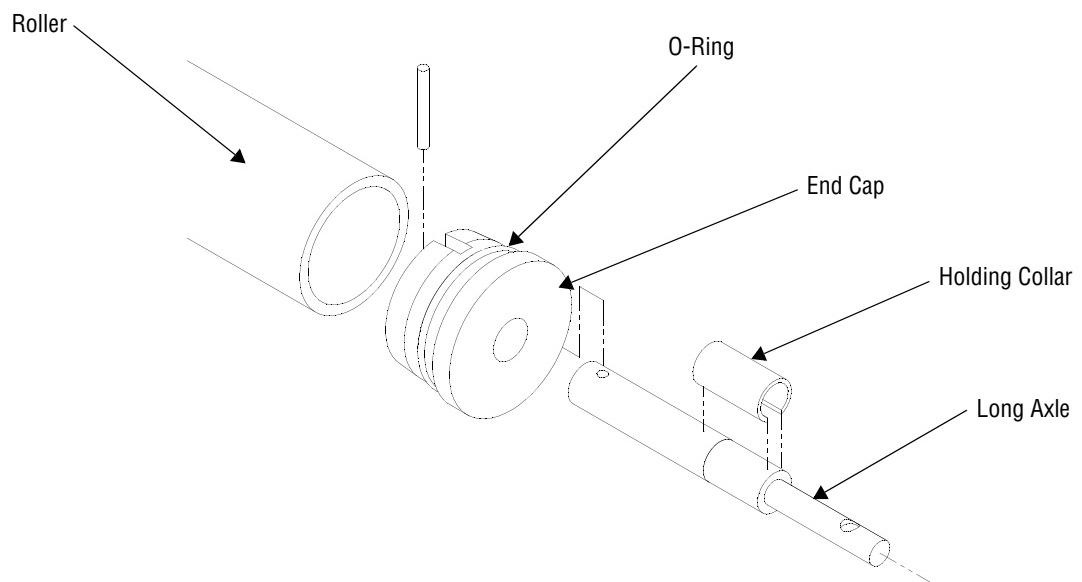
1. Before cleaning or servicing cage conveyor rollers, remove as follows:
    - a. Remove holding collar from long axle, located on removable end of roller (see Figure 5-3).
    - b. Place left hand on removable roller end cap, to hold firmly in place on frame (see Figure 5-3).
    - c. Slide roller on axle towards removable end.
    - d. Lift fixed end up and away from short axle (see Figure 5-2).
    - e. Repeat **Steps a to d** for each roller to be removed.
  2. Clean rollers in hot water using a mild detergent.
  3. Rinse under running water.
  4. Dry each roller using a clean, dry, lint-free cloth.
  5. Repeat for each roller.
  6. Apply stainless-steel cleaner for general stains or stainless-steel stain remover for stubborn stains.
  7. Using a damp cloth or sponge, rub in a back-and-forth motion, in same direction as surface grain.
  8. Polish surface with a clean, dry, lint-free cloth, using stainless-steel polish, if desired.
  9. After cleaning conveyor rollers, reassemble as follows:
    - a. Insert roller on long axle (pulling roller towards frame).
    - b. Push roller assembly firmly against roller cap (see Figure 5-3).
- NOTE: Ensure O-ring is correctly placed and in good condition. If not, replace O-ring. Refer to SECTION 7, REPLACEMENT PARTS AND PRODUCTS, for ordering information.*
- c. Turn holding collar until it locks in position over shaft.
  - d. Align roller on fixed end cap. Slide and push firmly into place (see Figure 5-2).
  - e. Snap holding collar over axle (see Figure 5-3).
  - f. Repeat **Steps a to e** for each roller to be reinstalled.



**Figure 5-1. Cleaning and Maintenance**



**Figure 5-2. Removing Roller (Fixed End)**



**Figure 5-3. Removing Roller (Removable End)**

### **5.3.2 Empty Dust Collection System Bag**

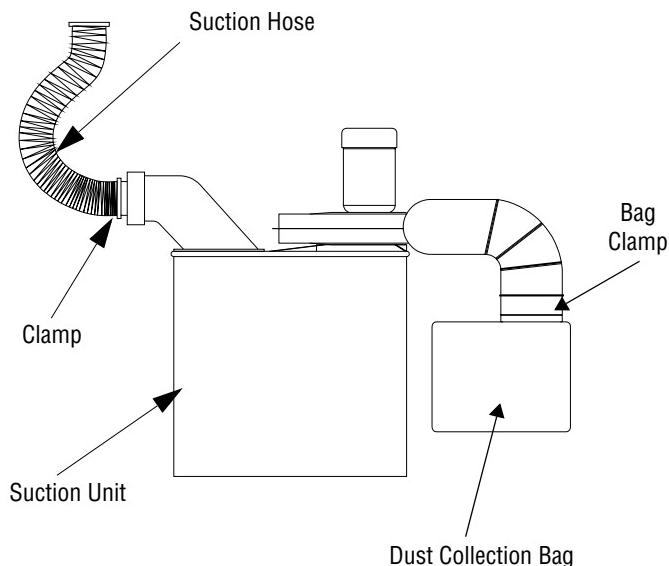


**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.

#### **See Figure 5-4.**

Empty dust collection bag as follows:

1. Lock electrical disconnect switch in OFF position.
2. Remove clamp holding dust collection bag in position.
3. Empty bag.
4. Reinstall bag using previously removed clamp.
5. Verify dust is not accumulated inside suction hose:
  - a. Remove clamp holding hose in position and empty suction hose.
  - b. Reinstall clamp joining hose to suction unit. Ensure hose does not form humps under suction unit inlet level.
6. Unlock electrical disconnect switch and position to ON.



**Figure 5-4. Empty Dust Collection Bag and Suction Hose**

### **5.3.3 Clean Bedding Dispenser Exterior**



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.



**CAUTION – POSSIBLE EQUIPMENT DAMAGE:** Use non-abrasive cleaners when cleaning unit. Follow directions on container and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners are harmful to stainless steel.

STERIS recommends using the following cleaning products (refer to Table 7-2 for ordering information):

- **Pryde™ Multipurpose Cleaner** – for routine cleaning and polishing of unit.
- **Pry® Stain Remover Cream** – for stubborn stains.
- **Stainless-Steel Cleaner** – for cleaning stainless-steel surfaces.

*NOTE: To clean unit exterior, note the following:*

- 1) *Follow manufacturer's recommendations for proper product use (concentrations, precautions to be taken, etc.) and read the Material Safety Data Sheet (MSDS) for safety information.*
- 2) *A lower service access panel is provided on the unload side of the unit to ease cleaning of the dispenser portion of the unit.*

At least once a week, clean unit exterior using a multipurpose cleaner for general stains, a stainless-steel stain remover for stubborn stains and a stainless-steel polish to keep equipment looking like new.

1. Lock electrical disconnect switch in OFF position.
2. Using a damp cloth or sponge, apply cleaner in a back-and-forth motion, in same direction as surface grain.
3. Thoroughly wipe off cleaner.
4. Polish surface with a clean, dry, lint-free cloth.

*NOTE: To ease cleaning of unit interior, a plugged cleanout drain is provided, at bottom of dispenser.*

5. Unlock electrical disconnect switch and position to ON.

## 5.4 Weekly Maintenance

### 5.4.1 Verify Gearbox Oil Level



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.

See Figures 5-1 and 5-5.

1. Lock electrical disconnect switch in OFF position.
2. Locate gearbox at top left side of unit, viewed from load side (see Figure 5-1).
3. On right side of gearbox, loosen gearbox top oil level plug. Do not remove plug (see Figure 5-5).
4. Oil should drip from hole. If not, add good quality gearbox oil as necessary.  
*NOTE: See Table 5-2 for list of approved lubricants.*
5. Retighten plug.
6. Unlock electrical disconnect switch and position to ON.

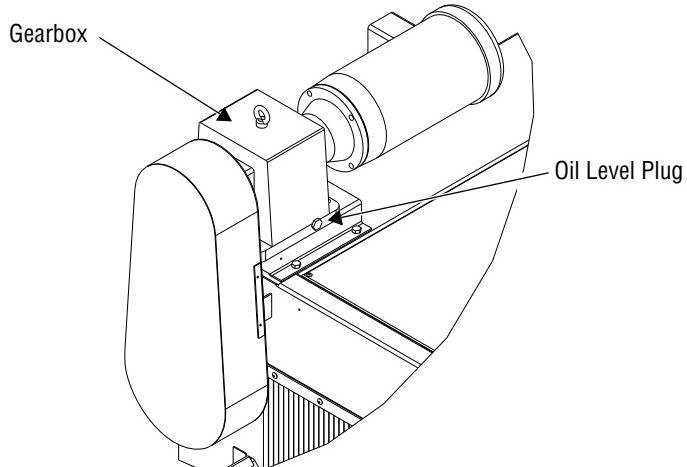


Figure 5-5. Verify Gearbox Oil Level

Table 5-2. Approved Lubricants For Gearboxes

Manufacturer	Worm Gears AGMA #7 Compounded	Spur, Bevel, Helical AGMA #4 EP
Chevron Oil Co.	Cylinder Oil 460X	NL Gear Compound #150
Exxon Oil Co.	Cylesstic TK 460	Spartan EP 150
Gulf Oil Co.	Transgear EP 460	EP Lubricant HO 150
Mobil Oil Co.	600 W Cylinder Oil	Mobilgear 629
Shell Oil Co.	Valvata J460	Omala 150
Sun Oil Co.	Gear Oil 7C	Suneo 1060
Texaco Inc.	Vanguard Cylinder Oil 460	Meropa 150

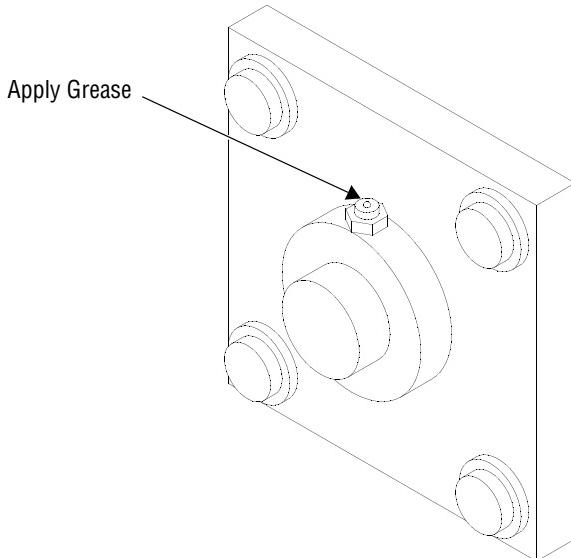
## **5.4.2 Grease Cage Conveyor Bearings**

**See Figures 5-1 and 5-6.**

Once a week, grease conveyor bearings as follows:

1. Lock electrical disconnect switch in OFF position.
2. Locate six conveyor bearing grease cups, three on each side of unit (see Figure 5-1).
3. Apply two gun strokes of lithium-base grease to each bearing cup (see Figure 5-6). Refer to *SECTION 7, REPLACEMENT PARTS AND PRODUCTS*, for ordering information.
4. Unlock electrical disconnect switch and position to ON.

**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD: Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.**



**Figure 5-6. Grease Conveyor Bearings**

### **5.4.3 Adjust Dispenser Take-Up Bearings**



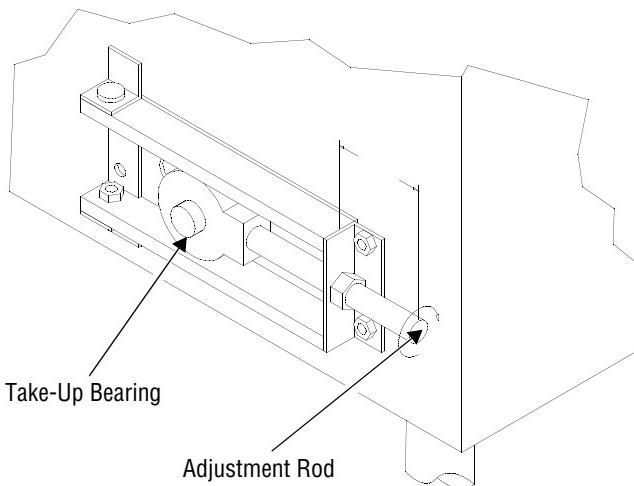
**WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Repairs and adjustments to this equipment must be made only by STERIS or STERIS-trained service personnel. Non-routine maintenance performed by unqualified personnel or installation of unauthorized parts could cause personal injury, result in improper equipment performance, void the warranty or result in costly damage. Contact STERIS regarding service options.



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.

**See Figures 5-1 and 5-7.**

1. Lock electrical disconnect switch in OFF position.
2. Locate dispenser take-up bearings (see Figure 5-1).
3. Adjust take-up bearings on dispenser belt, as needed, for tension and proper tracking. Turn clockwise to tighten, counter-clockwise to loosen (see Figure 5-7).
4. Ensure adjustment distance is exactly the same on both sides of dispenser belt. Do not overtighten.
5. Unlock electrical disconnect switch and position to ON.



**Figure 5-7. Adjust Dispenser Take-Up Bearings**

#### **5.4.4 Adjust Dispenser Driving Chain Tensioner**



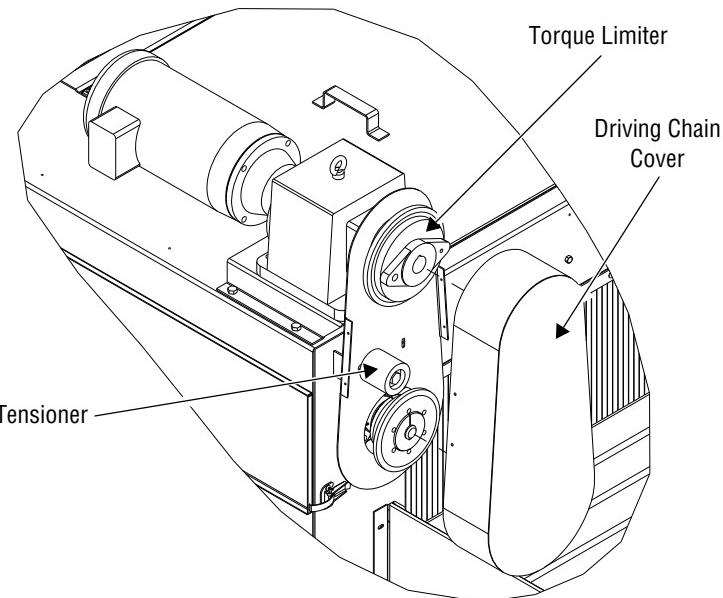
**WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Repairs and adjustments to this equipment must be made only by STERIS or STERIS-trained service personnel. Non-routine maintenance performed by unqualified personnel or installation of unauthorized parts could cause personal injury, result in improper equipment performance, void the warranty or result in costly damage. Contact STERIS regarding service options.



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.

See Figure 5-8.

1. Lock electrical disconnect switch in OFF position.
2. Remove driving chain cover.
3. Adjust tensioner until there is no slack on chain as follows:
  - a. Using appropriate tools, loosen bolt inside tensioner while holding nut located behind bolt.
  - b. Push on tensioner until there is no slack on chain.
  - c. Using appropriate tools, tighten bolt inside tensioner while holding nut located behind bolt.
4. Reinstall driving chain cover.
5. Unlock electrical disconnect switch and position to ON.



**Figure 5-8. Adjust Dispenser Driving Chain Tensioner**

### **5.4.5 Replace Shear Pin on Torque Limiter**



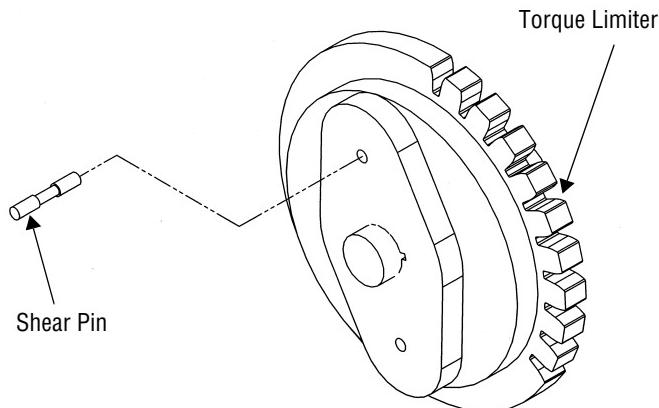
**WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Repairs and adjustments to this equipment must be made only by STERIS or STERIS-trained service personnel. Non-routine maintenance performed by unqualified personnel or installation of unauthorized parts could cause personal injury, result in improper equipment performance, void the warranty or result in costly damage. Contact STERIS regarding service options.



**WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.

**See Figures 5-8 and 5-9.**

1. Lock electrical disconnect switch in OFF position.
2. Remove driving chain cover (see Figure 5-8).
3. Remove broken shear pin parts from torque limiter and sprocket using a suitable tool.
4. Align shear pin hole located in torque limiter with hole located in sprocket.
5. Insert new shear pin inside hole using an Allen key.
6. Reinstall driving chain cover.
7. Unlock electrical disconnect switch and position to ON.



**Figure 5-9. Replace Shear Pin on Torque Limiter**

## TROUBLESHOOTING



**IMPORTANT:** A listing of the Safety Precautions to be observed when operating and servicing this bedding dispenser can be found in SECTION 1 of this manual. Do not operate the equipment until you have become familiar with this information.



### **WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE**

**HAZARD:** Repairs and adjustments to this equipment must be made only by STERIS or STERIS-trained service personnel. Non-routine maintenance performed by unqualified personnel or installation of unauthorized parts could cause personal injury, result in improper equipment performance, void the warranty or result in costly damage. Contact STERIS regarding service options.



### **WARNING – PERSONAL INJURY**

**HAZARD:** Keep fingers and hands away from chains, gears or any other moving parts. Also avoid wearing loose clothing that could get caught in mechanical parts.



### **WARNING – ELECTRIC SHOCK**

**AND/OR BURN HAZARD:** Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.

This section describes the types of Basil® 3600 Bedding Dispenser malfunctions that can occur and indicates probable causes and corrective actions.

If you are unable to correct the problem using the Troubleshooting Chart (see **Table 6-1**), or if a problem occurs that is not described in the chart, please call STERIS. A factory-trained technician will promptly place your bedding dispenser in proper working order.

**NOTE:** Never permit unqualified persons to service the bedding dispenser.

**Table 6-1. Troubleshooting Chart**

<b>Problem</b>	<b>Probable Cause/Corrective Action</b>
1. Bedding dispenser or conveyor not operating.	<ol style="list-style-type: none"> <li>1. <b>Power ON/OFF</b> selector switch positioned to <b>OFF</b>. Position to <b>ON</b> (refer to <i>SECTION 3.2.9</i>).</li> <li>2. Red <b>Unit STOP</b> pushbutton pressed. Pull out (refer to <i>SECTION 3.2.9</i>).</li> <li>3. <b>Dispenser ON/OFF</b> pushbutton positioned to <b>OFF</b>. Position to <b>ON</b> (refer to <i>SECTION 3.2.9</i>).</li> <li>4. Burned out fuse. Verify and replace if necessary.</li> <li>5. Verify MSP1 is not tripped.</li> <li>6. Wait two seconds after pulling <b>Unit STOP</b> pushbutton before pushing <b>Dispenser ON/OFF</b> pushbutton to activate bedding dispenser system. If there is no delay, push <b>Dispenser ON/OFF</b> pushbutton to <b>OFF</b> position. Then, push <b>Dispenser ON/OFF</b> pushbutton back to <b>ON</b> position.</li> <li>7. Call STERIS.*</li> </ol>
2. Dust coming out of bedding dispenser.	<ol style="list-style-type: none"> <li>1. <b>Dust Collector ON/OFF</b> pushbutton positioned to <b>OFF</b>. Position to <b>ON</b> (refer to <i>SECTION 3.2.9</i>).</li> <li>2. Check dust collection system and empty bag if necessary (refer to <i>SECTION 5.3.2</i>).</li> <li>3. Verify MSP2 is not tripped.</li> </ol>
3. Cage flip-over system does not work properly.	<ol style="list-style-type: none"> <li>1. Cage flip-over system must be installed as close as possible and parallel to roller connectors to washer (if connected to a Basil® 6700 Tunnel Cage Washer). Adjust cage flip-over system in correct position.</li> <li>2. Incorrect height difference between top of tunnel cage washer conveyor and top of Basil 3600 conveyor. Basil 3600 conveyor should be between 10-3/4 and 11" (273 and 279 mm) lower than tunnel cage washer conveyor.</li> </ol>
4. Rollers falling in drip pan.	Holding collar(s) missing. Reinstall holding collar on roller.

\* Service charges may be incurred. Consult your warranty for details.

**Table 6-1. Troubleshooting Chart (Cont'd)**

<b>Problem</b>	<b>Probable Cause/Corrective Action</b>
5. System operation very noisy.	<ol style="list-style-type: none"><li>1. Chain may be too slack. Verify chain slack and tighten if necessary (refer to <i>SECTION 5.4.4</i>).</li><li>2. Lubricate sprockets and shaft with lithium-base grease (P117951-457).</li><li>3. Chain gear may be worn out. Inspect gears for abnormal wear. Change if necessary.</li><li>4. Gear setscrews may be loose. Tighten setscrews.</li><li>5. Sprocket shaft brass bushing may be worn out, causing abnormal gear wear. Verify sprocket shaft bushing and change if necessary.</li><li>6. Shear pin may be worn out. Inspect shear pin and change if necessary (refer to <i>SECTION 5.4.5</i>).</li></ol>



**IMPORTANT:** A listing of the Safety Precautions to be observed when operating and servicing this bedding dispenser can be found in SECTION 1 of this manual. Do not operate the equipment until you have become familiar with this information.



## WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE

**HAZARD:** Repairs and adjustments to this equipment must be made only by STERIS or STERIS-trained service personnel. Non-routine maintenance performed by unqualified personnel or installation of unauthorized parts could cause personal injury, result in improper equipment performance, void the warranty or result in costly damage. Contact STERIS regarding service options.



## WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:

Disconnect all utilities to dispenser before servicing. Do not service dispenser unless all utilities have been properly locked out. Always follow local lockout-tagout and electrical safety-related work practice standards.

Use only STERIS authorized parts on this equipment. Use of unauthorized parts will void the warranty. To order replacement parts and/or supply products, proceed as follows:

1. Include part number and description of equipment on your order.
2. Include model and serial numbers of equipment on your order.
3. Send your order directly to STERIS.

Contact STERIS for service and if you need parts that are not listed below. **NEVER PERMIT UNQUALIFIED PERSONS TO SERVICE THE BASIL® 3600 BEDDING DISPENSER.**

Table 7-1. Replacement Parts

Description	Part Number
<b>Common Parts</b>	
FUSE, 4 Amp, 250 V	117952-810
PHOTOELECTRIC Control	117943-163
POTENTIOMETER	117913-480
LED, Green, 120 V	117913-080
LED, Red, 120 V	117913-096
LED, White, 120 V	117913-091
CONTACTOR	117911-123
ROLLER, PVC, For 42" Conveyor	117913-105
COLLAR, Holding	117984-416
O-RING, Vitton® <sup>1</sup> , 1-5/8" OD x 1-7/16" ID	117913-044
<b>208 Volts</b>	
STARTER, Manual, 4.5 - 6.3 Amp	117914-608

<sup>1</sup> Vitton is a registered trademark of DuPont Dow Elastomers.

**Table 7-1. Replacement Parts (Cont'd)**

Description	Part Number
<b>480 Volts</b>	
FUSE, 2.25 Amp	117913-048
STARTER, Manual, 2.2 - 3.2 Amp	117015-864
<b>Cage Flip-Over System</b>	
CAP, Roller End Without Shoulder	117984-635
COATING, Polyurethane 1/8" Wall x 37" Long (Units with S/N from 3609109000)	117061-152
BUSHING, Self-lubricant, 1-1/8" x 3/4" x 1-9/16	117017-240
BUSHING, Self-lubricant, 1/2" OD x 3/8" ID x 3/8"	117907-320
SPROCKET, Steel, H35B 9-3/8" Special	117911-930
SCREW, Nylon, Truss Head, 10-32 x 1/2" (Units with S/N from 3609109000)	117957-231
<b>Driving Chain Torque Limiter</b>	
SHEAR, Pin	117913-522
<b>Miscellaneous</b>	
GREASE (For Bearings)	117951-457
CYLINDER, Gas (Hopper Cover)	117916-309
CURTAIN, Plastic, 42" Conveyor	117007-347
BAG, Dust Collection System	117943-113
COATING Polyurethane, 1/4" Mur, 36-1/4" Long	117061-199
KEY, Chamber Access Door	117955-541
BUSHING, Self-Lubricant, 7/8" OD x 5/8" ID x 3/4"	117028-369
LATCH, Panel	117915-045
WHEEL, Dented, Steel, #35FB, 13-5/8, Finish Bore	117907-171
<b>Transfer Plates</b>	
PLATE, Transfer, Curved	117052-757
PLATE, Transfer, Flat	117054-049
GUIDE, Fall, bedding	117052-750

**Table 7-2. Cleaning Products**

Description	Quantity	Part Number
Pryde™ Multipurpose Cleaner	12 x16 oz (475 mL)	NM829
	6 x 32 oz (950 mL)	NM830
Pry® Stain Remover Cream	12 X 12 oz (340 g)	NM430